Amendments to the Claims:

The following is a listing of the claims which replaces all prior versions and listings of claims in this application.

Listing of Claims:

1. (currently amended) A method of providing a signaling channel for performing one or more signaling functions at an Ethernet level wherein telecommunication is organized by using ~~information~~ Ethernet information packets forming an information flow, the method ~~comprises~~ comprising:

monitoring at least one of the following: ~~the~~ said Ethernet information packets of said information flow, and external instructions;

based on results of the monitoring, producing service packets multiplexable with ~~the~~ said Ethernet information packets, and introducing, into ~~the~~ said service packets, data on said one or more signaling functions, ~~the~~ said data being at least an indication of a signaling function to be performed;

forming from said service packets at least one service flow at the Ethernet level, wherein ~~the~~ said service packets belonging to a specific service flow carry said indication of a corresponding specific one of said signaling functions;

multiplexing packets of said at least one service flow with packets of ~~the~~ said information flow thus forming a combined flow; and

utilizing for the telecommunication ~~the~~ said combined flow ~~composed from~~ comprising said information flow and ~~one or more of~~ said at least one service ~flow~ ~~flows,~~ while said at least

one service flow creates ~~one or more service flows form the~~ said signaling channel at the

Ethernet level.

2. (currently amended)   ~~A~~ The method according to Claim 1, ~~for~~ the method providing ~~the~~

said signaling channel at the Ethernet level between a first and a second operating points in a

network domain, said first and second operating points being referred to as the two basic

operating points, the method further comprising the steps of:

[[-]] arranging at ~~the~~ said first operating point a source adaptation element capable of receiving

~~the~~ said information flow from a first Ethernet device,

[[-]] arranging at ~~the~~ said second operating point a sink adaptation element capable of

transmitting ~~the~~ said information flow to a second Ethernet device,

[[-]] at ~~the~~ said source adaptation element, producing the service packets forming said at least

one service flow ~~one or more service flows~~ at the Ethernet level, and

multiplexing ~~the~~ said service packets of said at least one service flow ~~one or more service flows~~

with ~~the~~ said information packets of ~~the~~ said information flow, thereby obtaining ~~the~~ said

combined flow ~~with the signaling channel~~,

[[-]] transmitting data comprised ~~in the~~ by said combined flow via the network domain from ~~the~~

said source adaptation element to ~~the~~ said sink adaptation element,

[[-]] at ~~the~~ said sink adaptation element, extracting ~~the~~ said service packets of said at least one

service flow ~~one or more service flows~~ from said combined flow and processing said service

packets, thereby performing at least said ~~one or more~~ specific one of said signaling functions.

3-4. cancelled.

5. (currently amended) The method according to Claim 2, the method further comprising:

arranging one or more monitoring points between ~~the~~ said first and second operating

points.

6. (currently amended) The method according to Claim 2, the method further comprising:

arranging, between said two basic operating points at least one additional operating point

comprising at least one additional source or sink adaptation element, thereby forming two or

more signaling channels between said two basic operating points.

7. (currently amended) The method according to Claim 2, wherein a span of the network

domain between said two basic operating points consists of segments which belong to Ethernet

only, thereby enabling creation of ~~the~~ said combined flow in a pure Ethernet environment.

8. (currently amended) The method according to Claim 2, wherein a span of the network

domain between said two basic operating points comprises at least one segment of a transport

network, the method further ~~comprises~~ comprising:

preserving said signaling channel during a transmitting ~~of the~~ said combined flow via the

transport network.

9. (currently amended) The method according to Claim 1, further comprising at least one step

from the following list:

[[-]] mapping packets of ~~the~~ said combined flow into frames of a transport network for transmitting said Ethernet information packets and ~~the~~ said service packets via the transport network,

[[-]] de-mapping frames of a transport network incorporating said combined flow, for separating ~~thereof from~~ said frames therefrom, thereby preserving ~~the~~ said signaling channel at the Ethernet level.

10. (currently amended) The method according to Claim 8, further comprising the following steps:

[[-]] mapping packets of ~~the~~ said combined flow into frames of the transport network for transmitting said Ethernet information packets and said service packets via the transport network,

[[-]] de-mapping frames of the transport network incorporating said combined flow, for separating ~~thereof from~~ said frames therefrom ~~and processing~~, thereby preserving the signaling channel at the Ethernet level.

11. (currently amended) The method according to Claim 1, wherein at least one of said service packets has a header, the method further comprising:

indicating ~~of~~ a particular signaling function in ~~a~~ said header of ~~a service packet~~ said at least one of said service packets, and providing further data on said particular signaling function in a data field of ~~the~~ said at least one of said service packets.

12. (currently amended) The method according to Claim 1, wherein said one or more ~~of the~~ signaling functions are selected from at least the following:

a plurality of performance monitoring functions including at least one Tandem

Connection function,;

a one way and round trip delay measurement function,;

a far end status function,

a connection integrity check function,

a buffer fill check function,

a function for enabling congestion indication and rate control.

13- 17. cancelled

18. (currently amended) A system An assembly for creating a first signaling channel and for

analyzing a second signaling channel, both of said first and second signaling channels intended

for performing one or more signaling functions at an Ethernet level, the system assembly

comprising a source adaptation element and a sink adaptation element, wherein:

the source adaptation element is for creating the first signaling channel to be transmitted with an

information flow formed by outgoing Ethernet information packets, and is capable of:

[[-]] monitoring at least one of the following: said outgoing Ethernet information packets

forming an information flow, and external instructions,;

[[-]] based on results of the monitoring, producing service packets multiplexable with

said outgoing Ethernet information packets, and introducing, into the said service

packets, data on said one or more signaling functions, the said data being at least an

indication of a signaling function to be performed;

[[-]] forming from said service packets ~~one or more~~ at least one service flow[[s]] at the

Ethernet level, wherein ~~the~~ said service packets belonging to a specific service flow carry

~~an~~ said indication of a corresponding specific one of said signaling functions to be

performed; and

[[-]] multiplexing packets of said information flow and packets of said ~~one or more~~ at

least one service flow, [[s]] thus obtaining an outgoing combined flow, wherein ~~with~~ the

first signaling channel ~~formed by~~ comprises said ~~one or more~~ at least one service

flow[[s]]; and

the sink adaptation element is for terminating the second signaling channel and is capable of:

[[-]] receiving an incoming combined flow ~~composed from~~ comprising an incoming

information flow of ~~information~~ Ethernet information packets and ~~one or more~~ at least

one incoming service flow[[s]], wherein said ~~one or more~~ at least one incoming service

flow[[s]] ~~constituting~~ is comprised by said second signaling channel and ~~being formed

from~~ comprises service packets multiplexed with ~~the~~ said Ethernet information packets;

[[-]] demultiplexing said incoming combined flow to separate there[[-]]from ~~the one or

more~~ said at least one incoming service flow[[s]], wherein ~~the~~ said service packets

belonging to a specific service flow carry an indication of a corresponding specific one of

said signaling functions ~~to be performed~~; and

[[-]] analyzing ~~the one or more~~ said at least one incoming service flow[[s]] to perform at

least said specific one of said signaling functions respectively assigned to said specific

service flow[[s]].

19. cancelled.

20. (currently amended) ~~A~~ The system according to Claim 18, ~~for providing a signaling channel for performing one or more signaling functions at the Ethernet level, utilizing the assembly according to Claim 18,~~ wherein the first signaling channel and the second ~~signalling~~ signaling channel are the same signaling channel.

21. (currently amended) A method for providing a signaling channel for performing one or more signaling functions at an Ethernet level wherein telecommunication is organized by using ~~information~~ Ethernet information packets forming an information flow, the method ~~comprises~~ comprising:

monitoring at least one of the following: ~~the~~ said Ethernet information packets of said information flow, and external instructions;

based on results of the monitoring, producing service packets multiplexable with ~~the~~ said Ethernet information packets, and introducing, into ~~the~~ said service packets, data on said one or more signaling functions, ~~the~~ said data being at least an indication of a signaling function to be performed;

forming from said service packets at least one service flow at the Ethernet level, wherein ~~the~~ said service packets belonging to a specific service flow carry said indication of a corresponding specific signaling function; and

multiplexing packets of said at least one service flow with packets of ~~the~~ said information flow thus forming a combined flow, while said at least one service flow is comprised by ~~one or more service flows form~~ the signaling channel at the Ethernet level; [[and]]

wherein said one or more ~~of the~~ signaling functions enable achieving at least one of the

following objectives for [[said]] the telecommunication:

performance monitoring;

far end status indication, including remote failure indication;

remote loopback, including one way and round trip delay measurement;

link monitoring, including connection integrity check;[[,]]

buffer fill check;[[,]]

congestion indication; and

rate control.

22. (currently amended) A set of adaptation equipment for an Ethernet network node

communicating with a transport network, ~~the set being adapted to support~~ the set supporting at

least one signaling channel at an Ethernet level, the set ~~and~~ comprising at least one of the

following elements:

a source adaptation element for creating an outgoing signaling channel for performing

one or more signaling functions at the Ethernet level[[,]]; and

a sink adaptation element for terminating an incoming signaling channel for performing

one or more signaling functions at the Ethernet level, wherein

said source adaptation element comprises:

a monitor for monitoring at least one of the following: outgoing Ethernet information

packets forming an outgoing information flow, and external instructions;

a source function block for producing service packets multiplexable with ~~the~~ said

outgoing Ethernet information packets based on results of the monitoring, ~~which~~ wherein said

source function block introduces, into ~~the~~ said service packets, data ~~about~~ on said one or more

signaling functions, ~~the~~ said data being at least an indication of a ~~specific~~ signaling function to be

performed, and wherein said source function block forms from said service packets ~~one or more~~

at least one outgoing service flow[[s]] at the Ethernet level, wherein ~~the~~ said service packets

belonging to a particular outgoing service flow carry said indication of a specific one of said

signaling functions to be performed,

a multiplexer for multiplexing packets of said ~~one or more~~ at least one outgoing service

flow[[s]] with said outgoing Ethernet information packets ~~of the outgoing information flow~~ thus

obtaining an outgoing combined flow, wherein ~~with~~ the outgoing signaling channel ~~at the~~

~~Ethernet level formed by said one or more~~ comprises at least one outgoing service flow[[s;]], and

a mapping block for mapping ~~the~~ packets of said outgoing combined flow into frames of

the transport network for transporting thereof via the transport network; and

wherein said sink adaptation element comprises:

a de-mapping block which receives frames of the transport network that envelope an

incoming combined flow, and de-maps the received frames of the transport network thus

obtaining there[[-]]from the incoming combined flow ~~composed from~~ comprising an incoming

information flow of ~~information~~ Ethernet information packets and ~~one or more~~ at least one

incoming service flow[[s]], wherein said at least one incoming service flow comprises ~~formed~~

~~from~~ service packets multiplexed with ~~the~~ said Ethernet information packets ~~of the Ethernet~~

~~incoming flow,~~

a de-multiplexer for demultiplexing said incoming combined flow to separate there[[-

]]from ~~the one or more~~ said at least one incoming service flow[[s]] ~~constituting an incoming~~

~~signaling channel at the Ethernet level~~, wherein ~~the~~ said service packets ~~of the~~ belonging to said

incoming service flow[[s]] ~~comprise at least~~ carry an indication of a specific one of said

signaling function_s_, ~~and wherein the service packets belonging to a particular incoming service~~

~~flow carry an indication of a particular signaling function to be performed,~~ and

a sink function block for analyzing ~~the one or more~~ said at least one incoming service

flow[[s]] to perform at least said specific one of said signaling functions respectively assigned to

said incoming service flow[[s]].

23. (new) The system according to Claim 18, the system further comprising a mapping block for

transmitting said outgoing combined flow via a transport network, thereby ensuring transmission

of the first signaling channel via the transport network.

24. (new) The system according to Claim 18, the system further comprising a de-mapping block

for obtaining said incoming combined flow from frames of a transport network which envelope

said incoming combined flow, thereby ensuring reception of the second signaling channel via the

transport network and analysis thereof at the Ethernet level.